April 6, 2001

Klamath Project
2001 Annual Operations Plan

Introduction This memorandum describes the 2001 Annual Operations Plan (Plan) for the Bureau of Reclamation's (Reclamation) Klamath Project (Project), which is located within the Upper Klamath River Basin in southern Oregon and northern California. This Plan describes Project operations from April 7, 2001 through March 31, 2002 based upon current and expected hydrologic conditions.

Guiding Authorities Reclamation operates the Project pursuant to authority of the Reclamation Act of 1902, as amended and supplemented. The United States has a trust responsibility to protect rights reserved by or for federally recognized Indian tribes by treaties, statutes and executive orders. Reclamation must operate the Project consistent with its trust obligations to the tribes in the Klamath River basin; assure that its operations are not likely to jeopardize the continued existence of species listed under the Endangered Species Act (ESA); fulfill its contractual obligations to water users within the Project; and act in a manner consistent with obligations under the Migratory Bird Treaty Act and other federal laws that govern the protection of wildlife areas in the Basin.

Guiding Principles and Objectives Certain legal rights and obligations related to Reclamation's operations of the Project were described in a memorandum from the Regional Solicitor, Pacific Southwest Region (dated July 25, 1995). These rights and obligations form the legal framework for development and implementation of the Plan. In addition, the Pacific Northwest and Pacific Southwest Regional Solicitors prepared a memorandum (dated January 9, 1997) that further addressed legal principles applicable to Project operations. The guiding principles and objectives include:

Meeting the Requirements of the Endangered Species Act The Lost River and shortnose suckers, Coho salmon, and bald eagles are listed under the ESA. Reclamation will manage Project water supplies in accordance with the April, 2001, biological opinions issued by NMFS and the U.S. Fish and Wildlife Service (FWS) for this year's Project operation. Additionally, to meet ESA conservation obligations, Reclamation is undertaking actions which contribute to the conservation of listed species such as participating in significant habitat and basin restoration efforts, and conducting, funding, and participating in extensive research efforts to better understand the condition and needs of the species.

Trust Responsibility of the United States to Federally Recognized Tribes Within the Klamath River Basin The trust responsibility to the Klamath Basin Tribes is shared by all federal agencies that undertake activities in the Klamath Basin. Fishery and other resources in the Klamath River, Upper Klamath Lake (UKL), and nearby lakes and streams are important tribal trust resources to the Klamath Basin tribes.

Reclamation's Plan provides flow regimes and lake levels for protection of tribal trust resources within the limitations of the available water supply.

Providing Deliveries of Project Water Reclamation has contractual obligations to Project water users to provide water primarily for domestic and irrigation uses. The contracts for the majority of the Project area define this obligation as the amount of water necessary to meet the reasonable beneficial use of water for irrigation. Approximately 220,000 acres of agricultural lands are served by the Project. Objectives for water management include efficient delivery and use of water in growing agricultural products. Due to the requirements of the biological opinions and the ESA and the current drought conditions, only limited deliveries of Project water will be made for irrigation.

Conserving Wetland and Wildlife Values Normally, water is provided to meet the needs of several National Wildlife Refuges (NWR) within the Upper Klamath River Basin managed by the U.S. Fish and Wildlife Service and the states under various Acts, including the Migratory Bird Treaty Act, to provide suitable habitat for migratory birds and bald eagles. Due to the requirements of the biological opinions and the ESA and the current drought conditions, deliveries of Project water to the Tule Lake National Wildlife Refuge will be made only for endangered sucker species needs.

Water Operations Planning Process Reclamation has prepared the 2001Plan to serve as a planning aid for interested parties. A long-term planning process for Project operations is ongoing. The long-term plan will help clarify water availability resulting from future Klamath Project operations.

The State of Oregon is proceeding with adjudication of the water rights of the Klamath River Basin. To facilitate coordination with the adjudication, Reclamation currently envisions a three-staged approach to the long-term planning process for the project:

1. This Plan describes project operations from April 2001 through March 2002. The Plan may be modified if additional data or information relevant to the effects of project operation become available.

2. A long-term operations plan is to be developed and implemented in the future. It will guide project operations through completion of the adjudication. The long-term plan will be multi-year and will provide the framework of future annual operations plans.

3. Following the adjudication, the long-term plan will be revised as necessary.

Coordination and Consultation Reclamation will continue to seek information from and consult with various groups and individuals concerning the 2001 operations. These groups will include, but not necessarily be limited to: tribal governments, project water

users, PacifiCorp, other Federal agencies, local government agencies, state agencies, and the public.

Streamflow Forecast The Natural Resources Conservation Service's (NRCS) April forecast, at a 70% exceedance, indicates the inflow volume to UKL to be 108,000 acre-feet during the period of April through September. This inflow volume will be the smallest amount of inflow during the 40 years from 1961 through 2000. This streamflow forecast was used in the development of this Plan. If the NRCS forecasts for May and June vary significantly from this volume then this plan will be re-evaluated.

The available Project water supply is affected by non-Project diversions which are not controlled by Reclamation. These diversions potentially reduce the availability of water for storage and distribution.

2001 Operations Reclamation prepared the 2001 Plan (Table 1) for certain UKL levels and Klamath River flows at Iron Gate Dam consistent with the guiding principles and objectives. Reclamation used the spreadsheet planning model (KPOPFOR) which depicts water distribution among various uses. The model has been extensively reviewed and has been refined to serve as a major tool to assist planning of annual operations of the Project. The model is based on 40 years (1961 through 2000) of hydrologic record, and uses expected comparable preceding year types to predict outcomes.

Prior to listing of endangered and threatened species and the increased scientific understanding of the needs of ESA-listed species and tribal trust resources, the Project was operated to optimize irrigation diversions, with UKL releases and resulting flows at Iron Gate Dam (IGD) targeted to meet Federal Energy Regulatory Commission (FERC) minimums. Lake elevations were the result of hydropower releases judged against irrigation demand.

Minimum UKL levels and Klamath River flows have been specified as a result of ESA consultation on listed species. These values are shown in Table 1. As a result, current conditions indicate water deliveries to farms and refuges within the Project service area will be severely limited. Under the current hydrology, the UKL levels and river flows under this Plan are consistent with requirements of the ESA and Reclamation's obligation to protect Tribal trust resources.

Minimum Clear Lake Reservoir, Tule Lake Sump 1A and Gerber Reservoir elevations have been specified as a result of ESA consultation on listed species. The minimum elevations are as follows:

Clear Lake Reservoir	...	elevation 4521 feet on September 30;
Tule Lake Sump 1A	...	elevation 4034.6 feet for April 1 through September 30 and elevation 4034 feet for October 1 through March 31; and,
Gerber Reservoir	...	elevation 4802 feet on September 30.

For operational purposes the minimum elevation of Clear Lake for this year will be 4524 feet. As a result of the above, Project water deliveries to areas served by Gerber and Clear Lake Reservoirs are projected to be approximately 70,000 acre feet for irrigation needs. This amount may be affected by changes necessary to meet operational, hydrological and/or other conditions. In addition, stored water from Gerber and Clear Lake reservoirs will be used to meet evaporation needs in Tule Lake Sump 1A.

Table 1 - Klamath Project 2001 Operations

	Klamath River Flows Below Iron Gate Dam (Cubic Feet per Second)	Upper Klamath Lake Minimum Elevations (Feet) (See note 1)	
	ESA Requirements	ESA Requirements	Adjusted Minimums
April 7-15	1700	4142.5 (April 15)	4142.5 (April 15)
April 16-30	1700		
May 1-15	1700		
May 16-31	1700		4141.8 (May 31)
June 1-15	2100 (See note 2)	4142.5 (June 1)	
June 16-30	1700 (See note 2)		
July 1-15	1000	4141.5 (July 15)	4140.0 (July 15)
July 16-31	1000		
August	1000	4141.0 (Aug. 15)	
September	1000	4140.5 (Sept. 15)	4139.0 (Sept. 30)
October	(See note 3)	4140.0 (Oct. 15)	
November	(See note 3)		
December	(See note 3)		
January	(See note 3)	4141.0 (Jan. 1)	
February	(See note 3)	4142.0 (Feb. 15)	4141.5 (Feb. 15)
March	(See note 3)	4142.0 (Mar. 15)	4142.0 (Mar. 15)

Note 1: Adjusted minimums are derived from component number 2 of the Reasonable and Prudent Alternative specified in the biological opinion.
Note 2: Down ramping rates below Iron Gate Dam shall provide: (1) decreases in flows of 300 CFS or less per 24-hour period and no more than 125 CFS per four -hour period when IGD flows are above 1,750 CFS; or (2) decreases in flows of 150 CFS or less per 24-hour period and no more than 50 CFS per two-hour period when IGD flows are 1,750 CFS or less.
Note 3: The values for the months of October through March are anticipated to be provided through further consultation with NMFS. For purposes of this Plan, Reclamation used 1,300 CFS.

Wetter Than Forecasted In the event that weather conditions are significantly wetter than the forecasted conditions, water supplies for agriculture and NWR uses may be available after requirements of the biological opinions are met.

Drier Than Forecasted If drier than expected conditions result from either variations in snowpack runoff and/or weather conditions, Project operations could be modified by Reclamation as a result of joint recommendations from the FWS and NMFS.

Future Operations Planning Reclamation is continuing its efforts to develop a long-term operations plan. The 2001 Operations Plan includes biological measures for fish and wildlife resources that are important tribal trust resources. Reclamation expects the long-term plan to continue this progress. Reclamation will work with other Department of the Interior agencies, the States, and other parties to augment available supplies of water by taking action to implement a comprehensive water supply initiative. Reclamation will consider options that may arise from this water supply initiative and recognizes the need for continued progress in addressing habitat issues prior to making operational commitments that would affect water management in the future.

To support the operations planning effort, and in keeping with its ESA responsibilities, Reclamation is funding or carrying out a numerous studies and activities that will further the scientific knowledge of listed species and aid in developing programs to protect, conserve and recover these species.